

**REMARKS**

Claims 1-22 are pending in this application. By this Amendment, claims 1 and 13 are amended. Support for the amendments to claims 1 and 13 may be found at least at paragraphs [0079] to [0088] of the specification. No new matter is added by the above amendment. In view of at least the following, reconsideration and allowance are respectfully requested.

**I. Claim Rejection under 35 U.S.C. § 102**

The Office Action rejects claims 1-6, 8-11, 13-16 and 20 under 35 U.S.C. § 102(b) over U.S. Patent No. 6,183,898 (Koschany). This rejection is respectfully traversed.

It is well settled that a claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See MPEP § 2131. Despite the Office Action's assertions, Koschany does not teach each and every feature presently recited in claims 1-6, 8-11, 13-16 and 20.

Independent claims 1 and 13 recite, in part, "etching a substrate to form at least one gas channel [and] applying a first supporter layer within the at least one gas channel, wherein the first supporter layer comprises carbon or glass particles."

Koschany fails to teach, disclose or suggest the above-quoted features recited in claims 1 and 13. Specifically, Koschany fails to teach, disclose or suggest applying a first supporter layer within the at least one gas channel, wherein the first supporter layer comprises carbon or glass particles. Rather, Koschany, fails to teach even the presence of gas channels. Thus, Koschany fails to disclose each and every element recited in claims 1 and 13.

Claims 2-6, 8-11, 14-16 and 20 variously depend from claims 1 and 13. Because Koschany fails to teach, disclose or suggest the features recited in independent claims 1 and 13, dependent claims 2-6, 8-11, 14-16 and 20 are patentable for at least the reasons that claims 1 and 13 are patentable, as well as for the additional features they recite.

Accordingly, withdrawal of the rejections is respectfully requested.

**II. Claim Rejection under 35 U.S.C. § 103**

The Office Action rejects claims 12 and 19 under 35 U.S.C. § 103(a) over Koschany, in view of U.S. Patent No. 6,153,323 (Colbow) in view of U.S. Patent No. 6,753,108 (Hampden-Smith), and further in view of either U.S. Patent Application Publication No. 2003/0100824 (Warren), or U.S. Patent Application Publication No. 2003/0143444 (Liu). This rejection is respectfully traversed.

It is well settled that in determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *See* MPEP § 2141.02. To this end, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *See* MPEP § 2141.02 VI.

To establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation to modify the reference or to combine reference teachings; (2) there must be reasonable expectation of success; and (3) the prior art reference must teach or suggest all the claim limitations. *See* MPEP § 2142.

As discussed above, Koschany fails to teach all the presently claimed combination of features. Consequently, Koschany fails to teach all the claim limitations presently recited in independent claims 1 and 13. Based on claims 12 and 19 dependency on independent claims 1 and 13, respectively, Koschany also fails to teach all the claim limitations of claims 12 and 19. Therefore, the Office Action has failed to establish a prima facie case of obviousness with which to reject claims 12 and 19.

Claims 12 and 19 variously depend from claims 1 and 13. Because the applied reference fail to render the subject matter of independent claims 1 and 13 obvious, dependent

claims 12 and 19 are patentable for at least the reasons that claims 1 and 13 are patentable, as well as for the additional features they recite.

Accordingly, withdrawal of the rejections is respectfully requested.

**III. Rejoinder**

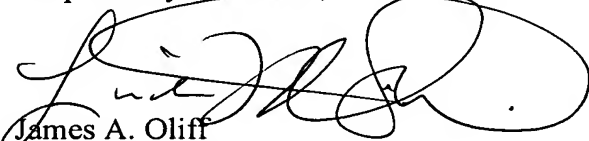
Pursuant to MPEP § 821.04, if the non-elected claims otherwise require all the limitations of an allowable claim, rejoinder of non-elected claims that include all the limitations of allowed claims is permitted. Accordingly, upon allowance of claim 13, rejoinder of claims 21 and 22 is respectfully requested.

**IV. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

  
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